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GENERAL DISCUSSION ON PROGRESS IN THE IMPLEMENTATION OF AGENDA 21, FOCUSING ON THE CROSS-SECTORAL COMPONENTS OF AGENDA 21 AND THE CRITICAL ELEMENTS OF SUSTAINABILITY

Letter dated 12 April 1995 from the Permanent Representative of Sweden to the United Nations addressed to the Secretary-General

I have the honour to request that the attached document regarding the Fourth Meeting of the Inter-Governmental Working Group on the Advancement of Environmental Statistics, held in Stockholm, Sweden, from 6-10 February 1995 (see annex), be circulated as a document of the third session of the Commission on Sustainable Development under agenda item 3.

(Signed) Peter OSVALD
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Annex

REPORT OF THE FOURTH MEETING OF THE INTERGOVERNMENTAL WORKING GROUP ON THE ADVANCEMENT OF ENVIRONMENTAL STATISTICS, HELD AT STOCKHOLM, FROM 6 TO 10 FEBRUARY 1995*

SWEDEN

Report to the Commission
on Sustainable Development
Session in April 1995

Environmental indicators

Plan for the compilation of a first set of indicators by the United Nations Statistical Division

Report from Sweden, host country at the Fourth meeting of the Inter-Governmental Working Group on the Advancement of Environment Statistics

Summary

At its 28th session, 27 February - 3 March 1995, the UN Statistical Commission approved a proposal for an international compilation of environmental indicators and requested the UN Statistical Division to allocate the necessary resources to this exercise. The Statistical Commission also welcomed the collaboration of the United Nations Statistical Division with the Department for Policy Coordination and Sustainable Development on indicators for sustainable development.

The proposal for the survey of environmental indicators was formulated by the Inter-Governmental Working Group on the Advancement of Environment Statistics, at its fourth meeting in Stockholm, Sweden, 6 - 10 February, 1995, the UN Statistical Division acting as secretariat. The Working Group agreed on a first list of environmental indicators as specified below. The list contains indicators which are available in many countries, and can thus be compiled in a short-term perspective.

The proposal from the Working Group is based on indicator lists presented at the Workshop on Indicators of Sustainable Development for Decision-Making in Ghent, Belgium, 9 - 11 January, 1995, at which indicators were discussed from the viewpoint of decision-makers. The Ghent Workshop i.a. recommended that UN Statistical Division begin to include data series needed for indicators for sustainable development in routine data collections.

1. Background

Proposals for environmental indicators and indicators of sustainable development have proliferated in the wake of 1992 Earth Summit on Environment and Development. A systematic and transparent approach is needed to derive indicators which both are related to concerns of sustainable development and can be defined rigorously in terms of data requirements.

The Inter-Governmental Working Group on the Advancement of Environment Statistics stated at its third meeting in Wiesbaden in December 1992, that the development of environmental indicators is of high priority. Since the meeting in Wiesbaden, the UN Statistical Division (UNSD) has collaborated in a joint technical task force with the Division for Policy Coordination and Sustainable Development (DPCSD) in preparing a "core set for indicators of sustainable development". UNSD has also participated, together with UNEP, in the Project on Indicators of Sustainable Development administered by the Scientific Committee on Problems of the Environment (SCOPE).

At the workshop on Indicators of Sustainable Development for Decision-Making (Ghent, Belgium, 9 - 11 January, 1995), representatives of governments and international organizations discussed the UNEP/DPCSD and SCOPE work. The need for indicators and frameworks of indicators which integrate environmental, social and economic aspects was stressed. One outcome of the workshop was to recommend that national statistical services, other appropriate institutions and UNSD begin to include data series needed to calculate indicators for sustainable development in their routine data collection, and contribute to research, development and harmonization of appropriate indicators. The Statistical Commission was urged to support this work by approving a first international survey of environmental indicators.

The Fourth meeting of the Inter-Governmental Working Group on the Advancement of Environment Statistics focused on the statistical aspects of environmental indicators, on the basis of the work done by other groups and the results of the Ghent workshop. It aimed at presenting a set of environmental indicators that can be used by national statistical services and be published by UNSD without a long period of preparation.

2. Results from the meeting in Stockholm of the Inter-Governmental Working Group on the Advancement of Environment Statistics

Around 25 countries were represented at the meeting, approximately one third from developing, one third from transition, and one third from developed countries. FAO, Eurostat and DPCSD were also present at the meeting. The United Nations Statistical Division served as secretariat to the meeting.

2.1. Content and compilation of a first set of environmental indicators

The main part of the meeting was devoted to discussions on environmental indicators. As a basis for the discussions, UNSD presented the paper, "Environmental indicators - methodological development and compilation", which had been prepared in collaboration with DPCSD and Statistics Sweden.

For the purpose of environmental indicators, Agenda 21 issues can be arranged in a number of clusters referring to different chapters of the report. The clustering proposed at the Stockholm meeting is:

- Environmental
  - Air/climate
  - Land/soil
  - Water
    - Fresh water
    - Marine water resources
  - Other natural resources
    - Biological resources
    - Mineral (incl. energy) resources
  - Waste
  - Human settlements
  - Natural disasters
- Economic
- Social/Demographic issues

To develop indicators, these clusters can be combined with a conceptual data production framework. In the 1980s, OECD started the development of environmental indicators, using the Pressure - State - Response - framework (PSR) to organize the indicators in reference to a list of environmental issues. The PSR-model is widely used nationally to develop environmental indicators and statistics. (In some cases the term "Driving forces" is used instead of "Pressures").

UNSD developed the UN Framework for the Development of Environment Statistics (FDES), which is used in many countries to organize environment statistics. It distinguishes:

A. Socioeconomic activities, events
B Impacts and effects,
C. Responses to impacts
D. Inventories, stocks, background conditions

The two approaches are similar to each other and are usually exchangeable. For most issues, there is a correspondence between the frameworks in the following way:

PSR framework	FDES framework
– Pressures (driving forces)	Socio-economic activities/events
– State	Impacts and effects
– Response	Responses to impacts
– Background (Inventories and stocks are usually found under "State")	Inventories, stocks, background conditions

The paper presented at the Stockholm meeting contained lists of indicators in clusters of Agenda 21 combined with PSR and FDES information categories.

The proposed lists were thoroughly discussed in three groups covering the following areas:

(a) air and water;
(b) land/soil and natural resources;
(c) waste, human settlements and natural resources.

The groups were asked to focus on indicators that were currently available or might become available in a few years, but also to discuss indicators that should be developed and compiled in the longer term.

To facilitate the publication of a first set of indicators, the groups were asked to identify a small number of indicators.

For each indicator, the groups were asked to report according to the following checklist:

Is the proposed indicator available? In some countries? In most countries? Regularly?
Can the indicator be made available in a few years?
Is the quality good enough?
What is the need for methodological development?
Is the indicator adequately documented (data sources, estimation, aggregation procedure)?

The groups were free to delete indicators, propose changes and add indicators to the list.

The discussions in the groups and in the following plenary discussion resulted in the following short list of indicators to be compiled in the first stage:

Short list of indicators to be compiled in the first stage

Agenda 21 issues (clusters)	**Pressure/ driving force** (PSR model) --- **Socio-economic activities, events** (FDES framework)	**State** (PSR Model) --- **Impacts and effects** (FDES framework)	**Responses** (PSR model) --- **Responses to impacts** (FDES framework)	--- **Inventories, stocks, background conditions** (FDES framework)
Air/climate	Emissions of CO_2, SO_2, and NO_x Consumption of ozone depleting substances	Ambient concentrations of CO, SO_2, NO_x, O_3 and TSP in urban areas	No indicators proposed in the short term	Weather and climate conditions
Land/soil	Land use change Use of fertilizers Use of agricultural pesticides	Area affected by soil erosion	Protected area as % of total land area	Arable land per capita

Water				
Fresh water resources	Annual withdrawal of ground and surface water Domestic consumption of water per capita Industrial agricultural water use per GDP	Concentration of lead, cadmium and pesticides in fresh water bodies Concentration of fecal coliform in fresh water bodies BOD and COD in fresh water bodies	Waste water treatment, total and by type of treatment (% of population served) Access to safe drinking water (% of population served)	Groundwater reserves
Marine Water resources	No indicators proposed in the short term	No indicators proposed in the short term	No indicators proposed in the short term	No indicators proposed in the short term
Other natural resources				
Biological resources	Annual roundwood production Fuelwood consumption per capita Catches of marine species	Deforestation rate Threatened and extinct species	Reforestation rate Protected forest area as % of total land area	Forest inventory
Mineral (incl. energy) resources	Annual energy consumption per capita Extraction of other mineral resources	Depletion of mineral resources (% of proven reserves)	No indicator proposed in the short term	Proven mineral resources Proven energy resources
Waste	Municipal waste disposal Imports and exports of hazardous waste	No indicators proposed in the short term	No indicators proposed in the short term	No indicators proposed in the short term

Human settlements	Rate of growth of urban population % of population in urban areas Motor vehicles in use per 1000 inhabitants	Area and population in marginal settlements % of population with sanitary services	No indicators proposed in the short term	No indicators proposed in the short term
Natural disasters	Frequency of natural disasters	Number of injuries and fatalities related to natural disasters	No indicators proposed in the short term	No indicators proposed in the short term

In addition, the publication of indicators should also contain indicators on economic issues (such as GDP per capita growth) and social demographic issues (such as population growth, absolute poverty, literacy, life expectancy). These issues were not discussed by the working group, as it mainly consists of environmental statisticians. Such indicators are readily available from existing statistical systems.

2.2. Further work and capacity building

The working group also identified a longer list of indicators. It was noted that this list would be the basis for further methodological work and review by the Working Group.

The working group also took note of the fact that the development of environmental and sustainable development indicators is an ongoing and iterative process. Further work is required at the conceptual level with regard to the underlying framework and the selection and definition of indicators. This work should proceed in parallel to the collection and application of selected indicators based on the development work to date. Experience gained and lessons learnt from the compilation and use of these indicators should be used as input to further development of sustainable development indicators. Ongoing development will require input from, and cooperation, of both users and producers. Data users while able to articulate their needs in general terms are often unable in the first instance to articulate the detail required for the selection and rigorous definition of measurable data items. Data producers have a role in interpreting the general requirements of users and suggesting those data items, obtaining feedback on their use and usefulness, and consequently refining them.

The Inter-Governmental Working Group also discussed the continuation of its work in the field of technical cooperation and support for developing countries and countries in transition Several results from technical cooperation projects were presented. The group recommended that UNSD adopt a clearing-house function for matching requests for technical cooperation with possibilities of support by national and multilateral donors. The group welcomed the preparation of practical manuals by UNSD and the regional commissions.

2.3. Habitat II Indicators

The agenda of the Working Group included an item devoted to Habitat II Indicators. A presentation was given of the status of work undertaken by UNCHS on urban indicators in preparation for the Habitat II conference to be held in Istanbul June 3 - 14, 1996. It was pointed out in the discussion that the relationships between urban environmental indicators, typically produced and used by municipal administrations, and environmental statistics, produced by national statistical services, need further examination. At a minimum, comparisons of concepts and methods developed by UNCHS with those of the environmental aspects of human settlements statistics should be carried out.

3. The twenty-eighth session of the UN Statistical Commission

The results and recommendations from the Fourth meeting of the Inter-Governmental Working Group on the Advancement of Environment Statistics was presented by the Director General of Statistics Sweden to the twenty-eighth session of the UN Statistical Commission, 27 February - 3 March 1995.

The Commission approved the proposal from the Inter-Governmental Working Group for an international compilation of environmental indicators, as a concrete step forward in developing harmonized concepts and methods based on actual data collection and availability. The Commission also welcomed the collaboration between UNSD and DPCSD on indicators for sustainable development and requested the Secretariat to communicate its full support of this work to the Commission on Sustainable Development at its forthcoming session. The need for further exploration of the links between economic, social and demographic and environmental indicators was stressed in this context. The Commission requested the United Nations Statistical Division to allocate the necessary resources to the compilation of environmental indicators.

The Commission as well stressed the need for capacity building and training in all fields of environmental statistics by means of seminars, workshops and country projects. It was pointed out that these efforts should be based as far as possible on harmonized concepts and methods. The Commission recognized, however, that further methodological work would have to be carried out before such harmonization could be reached.